

## CLAIMS

We claim:

1. A computer system for encrypting and decrypting a data element using a static key  
5       and a dynamic key, comprising:  
      said data element being statically encrypted with said static key;  
      said data element being dynamically encrypted with said dynamic key; and  
      said data element being decrypted with said dynamic key and said static key.
- 10   2. The computer system of Claim 1, wherein encryption with said static key is strong encryption.
3. The computer system of Claim 1, wherein encryption with said dynamic key is weak encryption.
- 15   4. The computer system of Claim 1, wherein:  
      said data element is encrypted with said static key on a first computer system;  
      said data element is encrypted with said dynamic key on a second computer system;  
      said data element is decrypted with said static key and said dynamic key on a third  
20       computer system; and  
      thereby encryption and decryption are distributed between said first computer system,  
      said second computer system, and said third computer system.
5. The computer system of Claim 4, wherein said second computer system is untrusted.
- 25   6. The computer system of Claim 1, wherein:  
      said data element is encrypted with said static key on a first computer system;  
      said data element is encrypted with said dynamic key on said first computer system;  
      said data element is decrypted with said static key and said dynamic key on a second  
30       computer system; and

thereby encryption and decryption are distributed between said first computer system and said second computer system.

- 5 7. A computer implemented method for encrypting a data element and decrypting said data element using a static key and a dynamic key, comprising:  
encrypting said data element with said static key;  
encrypting said data element with said dynamic key; and  
decrypting said data element with said static key and said dynamic key.
- 10 8. The method of Claim 7 further comprising strongly encrypting said data element with said static key.
9. The method of Claim 7 further comprising weakly encrypting said data element with said dynamic key.
- 15 10. The method of Claim 7, further comprising:  
encrypting said data element with said static key on a first computer system;  
transmitting said data element to a second computer system;  
encrypting said data element with said dynamic key on said second computer system;  
20 transmitting said data element to a third computer system;  
decrypting said data element with said static key and said dynamic key on said third computer system; and  
thereby distributing encryption between said first computer system, said second computer system, and said third computer system.
- 25 11. The method of Claim 7, further comprising:  
encrypting said data element with said static key on a first computer system;  
encrypting said data element with said dynamic key on said first computer system;  
transmitting said data element to a second computer system;  
30 decrypting said data element with said static key and said dynamic key on said second computer system; and

thereby distributing encryption between said first computer system and said second computer system.

12. The method of Claim 10, further comprising:

- 5       determining when transmission of said data element from said first computer system to said second computer system failed; and  
      repairing said data element without retransmission of said data.

13. The method of Claim 10, further comprising:

- 10       determining when transmission of said data element from said second computer system to said third computer system failed; and  
      repairing said data element without retransmission of said data.

14. The method of Claim 11, further comprising:

- 15       determining when transmission of said data element from said first computer system to said second computer system failed; and  
      repairing said data element without retransmission of said data.

15. An article of manufacture comprising a program storage medium readable by a

- 20       computer and embodying one or more instructions executable by the computer for causing a computer system to encrypt a data element and decrypt said data element using a static key and a dynamic key, comprising:

- encrypting said data element with said static key;  
      encrypting said data element with said dynamic key; and  
25       decrypting said data element with said static key and said dynamic key.

16. The article of manufacture of Claim 15 further comprising strongly encrypting said data element with said static key.

- 30       17. The article of manufacture of Claim 15 further comprising weakly encrypting said data element with said dynamic key.

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18. The article of manufacture of Claim 15, further comprising:

encrypting said data element with said static key on a first computer system;

transmitting said data element to a second computer system;

5 encrypting said data element with said dynamic key on said second computer system;

transmitting said data element to a third computer system;

decrypting said data element with said static key and said dynamic key on said third  
computer system; and

thereby distributing encryption between said first computer system, said second

10 computer system, and said third computer system.

19. The article of manufacture of Claim 15, further comprising:

encrypting said data element with said static key on a first computer system;

encrypting said data element with said dynamic key on said first computer system;

15 transmitting said data element to a second computer system;

decrypting said data element with said static key and said dynamic key on said  
second computer system; and

thereby distributing encryption between said first computer system and said second  
computer system.

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20. The article of manufacture of Claim 18, further comprising:

determining when transmission of said data element from said first computer system  
to said second computer system failed; and

repairing said data element without retransmission of said data.

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21. The article of manufacture of Claim 18, further comprising:

determining when transmission of said data element from said second computer  
system to said third computer system failed; and

repairing said data element without retransmission of said data.

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22. The article of manufacture of Claim 19, further comprising:

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determining when transmission of said data element from said first computer system  
to said second computer system failed; and  
repairing said data element without retransmission of said data.

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